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10/032,741	10/22/2001	Shin-Ichi Yamaguchi		6398

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EXAMINER

GOFF II, JOHN L

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 05/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-4

Office Action Summary

Application No.

10/032,741

Applicant(s)

YAMAGUCHI ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, drawn to a manufacturing method, classified in class 156, subclass 304.6.
- II. Claim 5, drawn to a manufacturing apparatus, classified in class 425, subclass 28.1.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as the manufacturing of an endless belt formed of only rubber.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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5. During a telephone conversation with William Squire on 4/21/03 a provisional election was made with traverse to prosecute the invention of I, claims 1-4. Affirmation of this election must be made by applicant in replying to this Office action. Claim 5 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

7. The disclosure is objected to because of the following informalities: On page 4, lines 3 and 6 delete "rein" and insert therein - - resin - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 2 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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10. Claim 2 requires a step of “forming said solid rubber sheet and a seamless substrate film into a laminated cylindrical shape”. Claim 2 further requires a step of “applying a pneumatic pressure to said laminated cylinder for vulcanizing said solid rubber sheet and for adhering said solid rubber sheet to said substrate so as to form said laminated cylinder in one piece”. It appears the rubber sheet and seamless substrate film are laminated, i.e. adhered, to one another in the applying step and not in the forming step. It is suggested to delete “laminated” in lines 4 and 5 for clarity.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bliss (U.S. Patent 3,964,846).

Bliss is directed to an apparatus for manufacturing endless belts, e.g. power transmission belts. Bliss teaches a cylindrical vulcanizing mold comprising an inner core mold and an outer casing mold. Bliss teaches forming a belt sleeve comprising at least one rubber layer and at least one tensile reinforcement layer (substrate with small stretchability), positioning the belt sleeve around the inner core of the vulcanizing mold, closing the mold, and applying heat and pressure to vulcanize the rubber layer and form an endless belt (seamless cylinder) (Figures 1 and 2 and

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Column 1, lines 36-41, 43-45, and 48-50 and Column 3, lines 37-41, 54-56, 62-64, and 66-67 and Column 4, lines 6-8, 37-39, and 45-47).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loose (U.S. Patent 4,898,765) in view of Bliss.

Loose is directed to method for manufacturing endless belts, such as driving or conveyor belts. Loose teaches a belt lay-up comprising at least one rubber ply and at least one textile fabric ply (substrate with small stretchability and a seamless substrate film) wherein the fabric is coated with a rubber or rubberlike material. Loose teaches the belt lay-up is vulcanized to cure the rubber and form the endless belt (Column 1, lines 8-14 and Column 2, lines 30-37 and 43-

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47). Loose is silent as to a specific method for vulcanizing the belt lay-up. One of ordinary skill in the art at the time the invention was made would have readily appreciated vulcanizing the belt lay-up taught by Loose using a cylindrical vulcanizing mold as this type of vulcanizing mold was well known in the art as shown for example by Bliss and only the expected results would be achieved.

Bliss is directed to an apparatus for manufacturing endless belts, e.g. power transmission belts. Bliss teaches a cylindrical vulcanizing mold comprising an inner core mold and an outer casing mold. Bliss teaches forming a belt sleeve comprising at least one rubber layer and at least one tensile reinforcement layer (substrate with small stretchability), positioning the belt sleeve around the inner core of the vulcanizing mold, closing the mold, and applying heat and pressure to vulcanize the rubber layer and form an endless belt (seamless cylinder) (Figures 1 and 2 and Column 1, lines 36-41, 43-45, and 48-50 and Column 3, lines 37-41, 54-56, 62-64, and 66-67 and Column 4, lines 6-8; 37-39, and 45-47).

16. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loose and Bliss as applied above in paragraph 15, and further in view of Billups et al. (U.S. Patent 6,409,621).

Loose and Bliss teach all of the limitations in claims 3 and 4 as applied above except for a teaching of forming additional coating layer(s) on the outer surface of the endless belt. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form on the outer surface of the endless belt taught by Loose as modified by Bliss a coated layer of fluoride as it was well known in the art to apply a coating of fluoride to the outer surface of an endless belt to minimize wear on the belt surface as shown for example by Billups et al.

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Billups et al. are directed to a power transmission belt. Billups et al. teach applying a coating of fluoride to the outer surface of the belt prior to curing (vulcanizing) to reduce the coefficient of friction and minimize wear on the surface (Column 1, lines 21-24 and Column 2, lines 11-12 and Column 3, lines 27-31).

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

John L. Goff

John L. Goff
April 30, 2003

Michael W. Ball
Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700